IN THE CLAIMS:

Please cancel claims 18-25 amend claims 1, 4, 5, 26, 29 and 30 of the above-identified application as follows.

1. (Currently Amended) A multi-layer process for producing structural cementitious panels, comprising:

(a.) providing a moving web;

(b.) one of

(i) depositing a first layer of individual, loose fibers upon the web, followed by depositing a layer of settable slurry upon the web and

~~(c.)~~(ii) depositing a layer of settable slurry upon the web;

~~(d.)~~(c.) depositing a second layer of individual, loose fibers upon the slurry;

~~(e.)~~(d.) actively embedding said second layer of individual, loose fibers into the slurry to distribute said fibers throughout the slurry; and

~~(f.)~~(e.) repeating steps ~~(c.)~~(ii) through ~~(e.)~~(d.) until the desired number of layers of settable fiber-enhanced slurry is obtained and so that the fibers are distributed throughout the panel.

2. (Original) The process of claim 1 further including forming said multi-layered board with a forming device.

3. (Original) The process of claim 1 further including cutting the multi-layered fiber-enhanced slurry into board lengths.

4. (Currently Amended) The process of claim 1 wherein said steps ~~(e.)~~-~~(e.)~~(ii)-(d) are repeated at least three times so that the board ultimately has at least four layers.

5. (Currently Amended) The process of claim 1 wherein the thickness of each layer produced by steps ~~(e.)~~ ~~(e.)~~(ii)-(d) is in the approximate range of -.05 -.20 inches.

6. (Original) The process of claim 1 wherein said fibers have a tex value of equal to or greater than 30.

7. (Original) The process of claim 1 wherein said fibers have a tex value of equal to or greater than 70.

8. (Previously Presented) The process of claim 1 further including feeding said slurry onto said web using a nip roll feeder having a metering roll and a thickness control roll.

9. (Previously Presented) The process of claim 1 further including performing said active embedding step by creating a kneading action in said slurry.

10. (Previously Presented) The process of claim 1 further including providing a self-cleaning embedment device for performing said active embedding step.

11. (Previously Presented) The process of claim 1 further including performing said active embedding step by multiple applications of kneading force.

12. (Previously Presented) The process of claim 1 further including producing the last of the layers with an upper deck and a reverse rotating web which deposits a layer of slurry and fibers with a smooth outer surface upon the moving, multi-layered slurry.

13. (Original) The process of claim 1 further including providing a carrier layer to said moving web.

14. (Original) The process of claim 13 wherein said carrier layer is release paper.

15. (Original) The process of claim 1 wherein the fibers constitute at least 1.5% by volume of said slurry layers.

16. (Original) The process of claim 1 wherein the fibers constitute approximately 3% by volume of said slurry layers.

17. (Original) The process of claim 1 wherein the respective proportion of fibers in the slurry layers produced by steps (b.) through (e.) is represented by a projected fiber surface area fraction preferably less than 0.65 and most preferably less than 0.45.

18.-25. (Canceled)

26. (Currently Amended) A process for making fiber-embedded cementitious panels, comprising:

using the formula:

$$S_{f,l}^{P} = \frac{4V_f * t_{s,l}}{\pi d_f (1 - V_f)}$$

for determining a projected fiber surface area fraction of fibers in the resulting panel, said process including:

providing a desired slurry fiber volume factor V_f;

providing a ~~desired panel~~slurry layer thickness $t_{s,l}$ in the range of 0.05-0.20 inches;

adjusting at least one of the fiber diameter d_f and the ~~number of fiber~~ slurry layer thickness~~layers represented by~~ $t_{s,l}$ so that the fiber surface area fraction $S_{f,l}^{P}$, is ~~within desired parameters~~less than 0.65;

providing a supply of loose, individual fibers determined from the above-calculated fiber surface area fraction $S_{f,l}^{P}$;

providing a moving web;

depositing a layer of slurry upon said web;

depositing said supply of individual loose fibers upon said slurry; and

embedding said loose, individual fibers in said slurry so that said fibers are distributed throughout said slurry.

27. (Original) The process of claim 26 wherein the fibers constitute at least 1.5% by volume of slurry layers used to produce the panels.

28. (Original) The process of claim 26 wherein the fibers constitute approximately 3% by volume of slurry layers used to produce the panels.

29. (Currently Amended) The process of claim 26 wherein said projected fiber surface area fraction is ~~preferably less than 0.65 and~~ most preferably less than 0.45.

30. (Currently Amended) The process of claim 26 further including the step of producing the panel by creating multiple layers of fiber-incorporated slurry~~, wherein the thickness of each said layer is in the approximate range of .05 - .20 inches~~.

31. (Original) The process of claim 26 wherein said fibers have a tex value of equal to or greater than 30.

32. (Original) The process of claim 26 wherein said fibers have a tex value of equal to or greater than 70.